

REMARKS

The Claims have been amended to correct issues depicted by the examiner as well as for clarity.

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Applicant asserts that the present invention is new, non-obvious and useful. Favorable reconsideration and allowance of the application is respectfully requested.

STATUS OF CLAIMS

Claims 1-9 have been finally rejected.

Claims 1-9 have been cancelled.

New Claims 10-20 have been submitted

ARGUMENTS TO CLAIM REJECTIONS

35 U.S.C. § 102 Claim Rejections

In the Office Action, the Examiner rejected claims 1-9 under 35 U.S.C. § 102 (e) as being anticipated by Kurematsu (6,650,460 B2)

The applicant would like to address first the terms and abbreviations which are very common in the field of optics and displays. The applicant would like to establish its position that Kurematsu's invention is not in the same field of the applicant's invention, and that Kurematsu's optical system as well as the method by which his imagery is manipulated and displayed are different than the applicant's optical system and method, and the two inventions do not step on each other.

Mr. Lawrence E. Tannas, Jr. who is an internationally recognized authority and consultant on electronic information displays addressed in his book "Flat Panel Display and CRTs" (ISBN 0-442-28250-8) in chapter one-Introduction,

Paragraph 1.2 – Electronic Displays, Sub para. 1.2.1 – Introduction, "A display is an electronic component or subsystems used to convert electrical signals into visual imagery in real time suitable for direct interpretation by a humane observer. A display is a unique electro-optical devise. It must be scaled to human visual and anatomical requirements and yet be as lightweight with as low profile and using as little power as possible. It serves as the visual interface between user and machine. The visual imagery is pre-processed, composed, and optimized for easy interpretation and minimum reading error. The electronic display is dynamic in that it presents information within a fraction of a second from the time received and continuously holds that information, using refresh or memory techniques, until new information is received. The image is created by electronically making visible contrast patterns."

Paragraph 1.3 – Display Classification: "There are many ways of classifying displays- all of them somewhat arbitrary. One useful classifications shown in Fig. 1-9. The entire field can be divided into three categories:

- Projection
- Off-screen
- Direct view

....."

"The **Projection** classification encompasses all those displays which utilize a viewing screen separate from the optical image source. As the name implies, the image is projected with appropriate optics into a screen which serves as the diffusing surface with appropriate screen gain and directionality. The screen must be diffused, otherwise it can only be viewed from the specular reflection angle. The diffusing surface is the apparent image source. The viewer cannot see the originating image source. The projection can be either from the front or the rear of the screen."

LCD & DLP Projectors

(http://www.allbusiness.com/buyers_guides/LCD_Projectors/2861/Chapter_3040)

Digital projectors are often referred to as "LCD projectors" even when they are not actually using LCD technology. There are two main types of machines for projecting

computer images onto a screen: LCD projectors and DLP projectors. Though not substantial, the differences between these technologies are important to recognize when comparing similarly priced models.

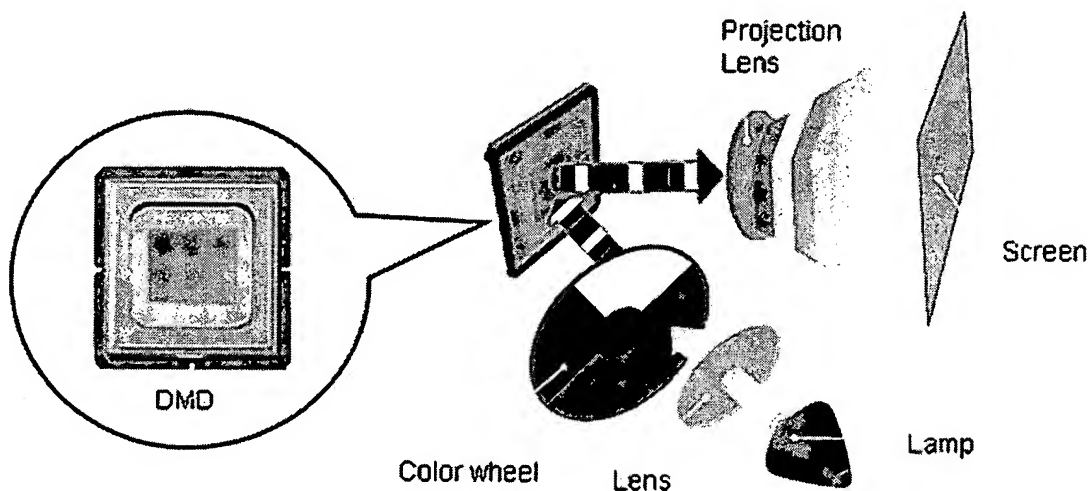
LCD (Liquid Crystal Display)

LCD projectors operate by shining light through transparent LCD cells. In older thin film transistor (TFT) displays, transistors controlled each cell, changing their polarity to produce the appropriate color.

More common now are advanced polysilicon LCDs, which use three separate color panels (red, green, and blue) to produce the desired color. In both types, the combination of light shining through the LCD cells produces the desired image.

DLP (Digital Light Processing)

Developed by Texas Instruments in mid-1996, DLP models project images by reflecting light against hundreds of tiny mirrors known as **digital micro mirror devices (DMD)**. Each mirror, representing one pixel, is individually powered by electronics that adjust the angle of the mirror according to the color being displayed. That, along with the fact they are leading the weight loss trend in the projector market, makes them very appealing for presentations. DLP projectors also handle video images extremely well.

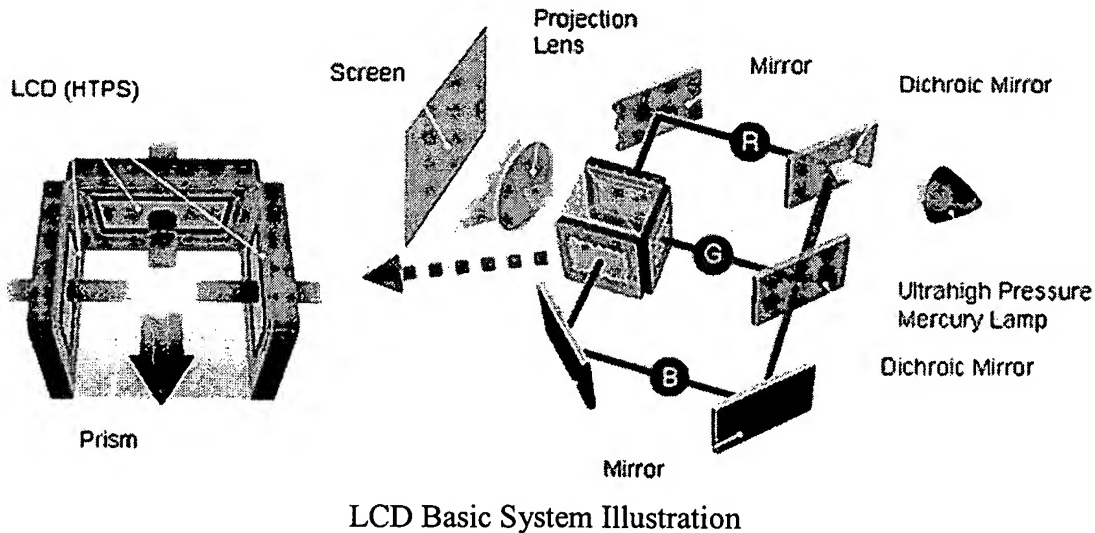


DLP Basic System Illustration

LCOS projectors

The next generation of digital displays will use liquid crystal on silicon (LCOS) technology. LCOS uses liquid crystals to control the path of light to micro mirrors. By combining elements of DLP and LCD projectors, LCOS projects are able to create very high-resolution images with excellent color saturation. Currently, only very high-end

projectors use this technology, but the technology will migrate to lower-priced models over the next few years.



Mr. Robert E. Fischer President, OPTICS 1, Inc. have BS and MS in optics with optics and engineering since 1967 and holding 1986 & 2000 SPIE award. Mrs. Biljana Tadic-Gaqleb Senior Staff Optical Engineer, OPTICS 1, Inc. has BS and MS in physics and MS in optics with over 20 years of experience as an optical system engineering, addressed in their book "Optical System Design" (ISBN 0-07-134916-2):

Chapter 14, Design of Illumination Systems, sub paragraph: Introduction

"Illumination optics is required in many varied system applications, including for example, microscopes, projection systems, machine vision systems, industrial lighting. In optical system where a **light source** is illuminating an object that has to be **projected onto a screen** as in desktop projector, the design often requires a high brightness and uniformity across the image. High brightness implies a high collection efficiency of light emitted from the source. Furthermore, these systems often require small packaging of the optical system. Light source have a wide range of types, shapes, and size, and the choice of the design of the illumination optics is very dependent on the source. Sources can be tungsten halogen lamps of different shapes, metal halide lamps, light-emitting diodes (LEDs), Xenon lamps, frosted bulbs, different forms of arc lamps, or fusion (sulfur) lamps....

Chapter 8, Design Forms, sub paragraph: Design of Visual Systems:

"**Visual optics** includes the wide variety of optical systems creating imagery to be **viewed directly by human eye**. This includes telescopes, microscopes, binoculars,

riflescopes, camera viewfinders, head mounted displays, magnifiers, and others.

Common to all of these systems is that the eye is looking into some form of viewing optics such as an eyepiece."

MIL-HDBK-141, Optical Design" Defense Supply Agency, Washington 25, D.C. 5

October 1962, on Chapter 7, Simple Thin Lens Optical Analysis, sub Para. 7.1.2 –"

Optical systems used with the eye. The optical system considered in this section are all used with the human eye, because the eye is an integral part of the system and must be considered in the design. There are four basic types of lenses: (1) microscope objectives, (2) telescope objective. (3) eyepieces, and (4) photographic objective. The first three are used with the human eye and systems employing these are discussed in section7."

MIL-HDBK-141

SIMPLE THIN LENS OPTICAL SYSTEMS

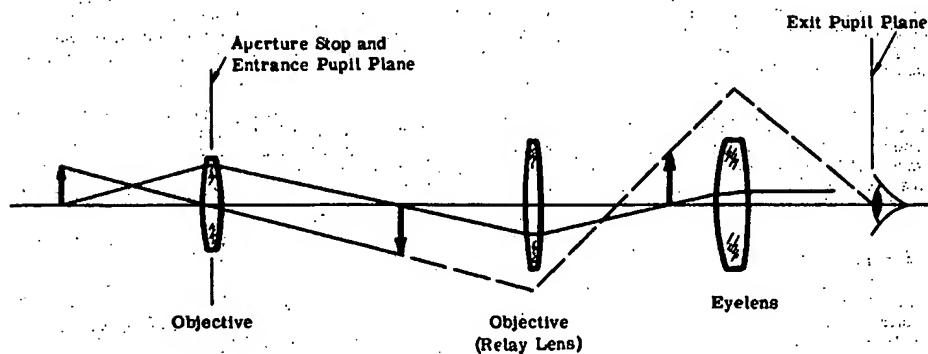


Figure 7.5 - An optical relay system or periscope.

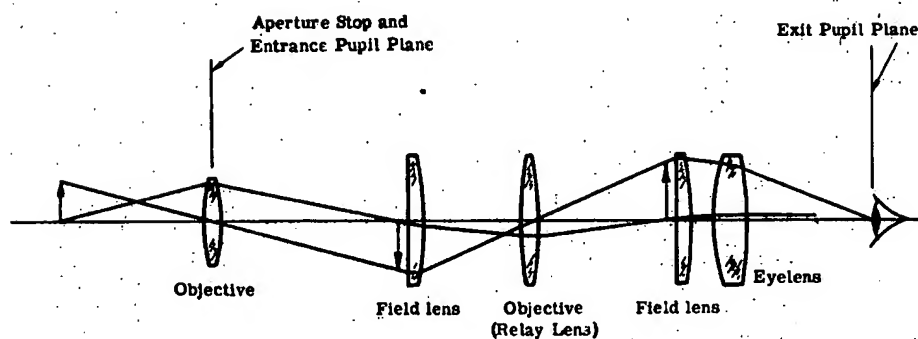


Figure 7.6 - A periscope with field lenses.

7-10

Optical Relay System-Periscopes ("MIL-HDBK-141, Optical Design" Defense Supply Agency, Washington 25, D.C. 5 October 1962)

Kurematsu vs. Applicant's Invention

The applicant would like to introduce the basic differences between Kurematsu's (6,650,460 B2) and the applicant's inventions, and would like to go through Kurematsu patent and address the following (Please Note: certain words in the quotations from patent 6,650,460 B2 have been underlined or emphasized by the Applicant for clarification purpose only):

Referring to Kurematsu (6,650,460 B2), Cover Page:

"Projection type display apparatus

Abstract

The invention relates to a projection type display apparatus having an optical modulating device (3) controlling a light reflecting state by using a mirror array device, and a projecting optical system (4) projecting reflected light of light illuminated from the optical modulating device (3). In the apparatus, the mirror array device is illuminated by R, G and B color light components from different directions, and at least a part of the reflected light of the mirror array device is selectively guided to the projecting optical system (4) to project the light on to the screen or the like by controlling a tilt angle of the mirror array device."

Kurematsu identified his innovation to the field of "Projection type display apparatus" The applicant would like to direct the examiner to the terms:

"Projection" - the image is projected with appropriate optics **into a screen** which serves as the diffusing surface with appropriate screen gain and directionality.

"Display" - is an electronic component or subsystems used to convert electrical signals into visual imagery in real time.

The applicant calls his invention "Method for Enhancing Visibility", and as specified in the **"Background – Field of Invention"** the invention relates to visibility, specifically

improving observation of darker objects when mixed with or surrounded by brighter or blinding objects."

The applicant is not using a display device or electronic signals to process or generate an image, nor using any type of screen. The applicant is using **visual optics** (please refer to the above terms and abbreviations) and Light Controlled Panel (LCP) to enhance the image when passing through the system.

Kurematsu, in "optical modulating device", is referring to the **DMD** or **AMA** device which is reflecting light against hundreds of tiny mirrors, which is by definition a reflecting **display**. The projected image is comprised of three **light sources** (please refer to the above projector systems) created by high illumination lamps, where the light is divided into three basic color components, Red, Green and Blue, either by "a color wheel" or by some dichroic filters. The projected image is constructed on a screen by Kurematsu projecting optical system.

Referring to Kurematsu Figure 1- " is a view showing the system configuration of a projection type display apparatus according to the first embodiment of the present invention;"

The applicant's invention is related to observation Optical systems used for the eye, Optical Relay Systems used in periscopes, telescopes and other types of observation systems. The applicant's system is constructed from a different optical systems, and as illustrated in Figure 4, where the observer is looking at a true image of the outside view and NOT at a screen displaying an artificial or electronic image.

Referring to Kurematsu (6,650,460 B2), (Column 1 , Line 5 - 10):

"1. Field of the Invention

The present invention relates to a projection type display apparatus and, more particularly, to a projection type display apparatus for displaying a full-color image on a display surface such as a screen using a mirror array device as optical modulation means."

Kurematsu is emphasizing the basic nature of his invention which is of projection type, and requires a display surface such as a screen.

Referring to Kurematsu (Column 5 , Line 10 - 14):

“DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A television signal or video signal is applied to the piezoelectric actuator (pixel mirror actuator) of each pixel of the mirror device at a predetermined timing. Accordingly, each pixel mirror in the AMA sequentially executes tilt operation of a predetermined amount."

Kurematsu explains exactly how the projected image is created using the AMA **display** via a television or video signal which tilts the appropriate pixel mirror. In other words, the AMA or DMD **display** utilizes electronic signals (TV or Video signal) to ma reconstruct the image on the screen. This light does not resemble a complete image since at any given time only one fundamental color (Red Green or Blue) is projected, and a control signal with predetermined timing is required for its manipulation.

The applicant's invention enhances a complete image with the LCP device which is not a **Display** device. Rather, the LCP is a Light Control Panel which directs or attenuates the light by an active pixilated device. Each of the LCP pixels contains a light control mechanism which is controlled by an embedded Light Sensitive Element (LSE). The embedded Light Sensitive Element depends on the intensity of the image, and does not rely on any control signal with predetermined timing. Thus the basic method for manipulating the light is different from the method depicted in Kurematsu's invention.

In Kurematsu (Column 5 , Line 30 - 40):

"Each of the single-color illumination units 1R, 1G, and 1B of three primary colors is formed from a single-color laser and beam expander. The optical axes of the three units are not parallel. An exit light beam diverges by a predetermined amount. As a single-color laser for red, a krypton laser is used. As a single-color laser for green, a krypton laser or argon laser is used. As a single-color laser for blue, an argon laser is used. However, the present invention is not limited to these lasers, and any other laser source

that oscillates light in the red, green, or blue wavelength band can be used. The laser may be either a solid laser or a gas laser."

Kurematsu explains exactly how the three color illumination units are constructed, by using three lasers for R, G, and B colors. The applicant is not using and does not require any laser source or any artificial light source of any kind. The invented system enhances the real scenery and is not manipulating the image by dividing it into the three basic colors!

Claim Rejection - 35 USC § 102

Upon the above discussions the examiner is requested to re-evaluate the answers related to the examiner's rejections according to 35 USC § 102 following the appropriate paragraphs as being anticipated by Kurematsu (6,650,460):

Regarding claim 1, the Examiner stated that "Kurematsu discloses (refer to figures 1 and 2) a method of enhancing visibility at various light conditions (i.e., 1R, 1G, 1B) comprising steps like: focusing the desired object or view (source image) on a light modulating device (AMA 3) ; modulating the light of the focused image (object) by a device like a Light Control Panel (LCP) (4), such that desired image elements can have different intensities thus generating an enhanced image; and projecting the enhanced image with the magnification (column 4, lines 19 – 27, lines 66 – 67, column 5, lines 1 – 5)."

Kurematsu discloses that his patent is in the field of a projection type of display having an optical modulating device (mirror array device) controlling/reflecting one or three light sources (R, G and B color) created by a projecting optical system. The A The mirror array device is selectively guided by the projecting system, to project the light on a screen by controlling the tilt angle of each mirror in the array, in predetermined timing.

The Applicant's invention is using two optical systems: one mounted in the light path before the LCP for collimating the desired image, and the other is mounted behind the LCP for focusing and projecting the manipulated image to the observer's eye.

Kurematsu's system uses an optical system only for projecting the reflected pixelated image of the mirror array and generating a projected image on a screen. It can not project an image directly to the observer's eye since it projects only one of the three components of the light at a time. As such, the basic elements in Kurematsu's system are constructed in a different way than in the Applicant's system.

Referring to Fig 1 and 2 of Kurematsu's patent, the light source (RGB) [1] or monochrome [10] projected through an optical array comprises elements 20 and 21 or 22 to 24 on the mirror array [3] to be reflected by the active pixels (thus generating the

required image) which are then projected on an external screen by another optical array [4].

The Applicant's invention is constructed differently, as depicted in Figure 4, where the invented system manipulates the natural image and optically relays it to the observer's eye. Kurematsu's invention has to utilize the three separate light components of the projected light source and generate an image by electronic processing media (Video, Computer, digital data etc.). These images have to be first divided into their basic Red/Green/Blue components via an image processor (Computer), and then be manipulated by the array of mirrors and displayed to the observer by using a screen, like a picture created by a television set. The current application uses complete and natural images as seen by eye, modified and enhanced by the Light Control Panel (LCP). No light separation or projection is taking place.

The LCP properties in the Applicant's system are also different from the displays technology DMD (Deformable Mirror Device), or AMA (Actuated Mirror Array) addressed in Kurematsu's patent, even though both have a pixelated element construction. The Light Control Panel used by the applicant has a Light Sensitive Element (LSE) embedded within each individual pixel element (transmissive or reflective) that automatically controls each display pixel element (see Fig. 3), while Kurematsu's image is generated by a reflective array which is driven by an external source such as computer or image generator, in predetermined timing.

Kurematsu's projection system requires projection of the light components on the mirror array (No image is generated at this stage) while the Applicant's invention does not require such an optical element.

Referring to Column 4, line 19-27 in patent 6,650,460, Kurematsu discloses that:

"An apparatus described above preferably has a feature that the angle ranges include first, second, third, and fourth ranges, when the tilt angle falls within the first range, red is displayed on the projected surface, when the tilt angle falls within the second range, green is displayed on the projected surface, when the tilt angle falls within the third range, blue is displayed on the projected surface, and when the tilt angle falls within the fourth range, black is displayed on the projected surface."

In this paragraph Kurematsu emphasizes the need for a projection display system which constructs the artificial image by manipulating the three basic colors and black with reflective mirrors that can be tilted at four discrete angles. This is different than the Applicant's invention which manipulates the real-image (all color elements at the same time without any separation) using a transparency or reflectivity control LCP that can continuously controls the intensity of the image.

Referring to Column 4, lines 66-67, column 5, lines 1-5 in patent 6,650,460, Kurematsu discloses that:

“As shown in FIG. 1, a projection type display apparatus of the present invention comprises a thin-film AMA 3 for displaying an image by controlling the reflecting direction of light for each pixel using a thin-film piezoelectric actuator, single-color illumination units 1R, 1G, and 1B for irradiating the AMA 3 with three primary color light components, and a projecting optical system 4 for projecting reflected light of the R (red), G (green), and B (blue) light components with which the AMA 3 is irradiated. When the projection light is projected onto a screen (not shown), an image is displayed.”

In this paragraph Kurematsu enforces the Applicant's statement that no true image is processed within his system, since the "light components" are not an image by itself. The thin-film AMA 3 contains piezoelectric actuators that control the mirrors which reflect the light components, while in the Applicant's (current) invention the light passes through the LCP where its intensity is manipulated by the change in transparency/reflectivity of each pixel. This transparency/reflectivity is controlled internally by a photo sensitive device (LSE) rather than by an external signal with predetermined timing. Kurematsu's invention is based on a projection system, projecting R (red), G (green), and B (blue) light components then using mirrors to reflect each of these components at four optional discrete directions, and then display the result on a screen as an artificial image, while the current invention is manipulating the real image (as seen through the window, or a telescope, etc.) by continuously

changing the transparency/reflectivity of the LCP when the light (image) passes through or is reflected from it.

Regarding claim 2, the Office Action stated that “Kurematsu discloses, optics may comprise an optical array based on any optical technology as optical film array (AMA 3) (column 5, line 7).”

In Col 5 line 7 Kurematsu discloses: “...and a projecting optical system 4 for projecting reflected light of the R (red), G (green), and B (blue) light components with which the AMA 3 is irradiated.”

In this paragraph Kurematsu uses optical film array which is irradiated by the R G B light sources projected towards the AMA, while the applicant’s LCP invention is using a reflective or transmissive array with an embedded light sensor in each pixel, which is different than the AMA. Also, the LCP is manipulating the entire natural observed image rather than R G B components provided by a light source. The applicant is using the optical relay for focusing the image on the LCP and projecting the manipulated image to the observer, while Kurematsu uses the optical array to project the RGB light components on the AMA.

Regarding claim 3, the Office Action stated that “Kurematsu discloses, wherein the light modulating system comprise a light control panel (LCP) based on any pixelated light modulating technology as reflective (column 6, lines 30 – 39).”

In Col 6 lines 30-39 Kurematsu discloses that: “According to this embodiment, color switching and gray level display of each color light component can be done only by controlling the drive voltage to each pixel mirror.”

In this paragraph Kurematsu states that his invention requires a drive voltage to control each pixel mirror. The Applicant’s light control panel is different, since it is designed with the light controlled sensor embedded in each pixel, thus the light control is performed automatically within each pixel and does not require external control signals.

Regarding claim 4, the Office Action stated that “Kurematsu discloses, where the source image is collimated (20) and manipulated such that the enhanced image appears to be originated from the source image; and whereby light and enhanced image can be of any frequency range in the spectrum (column 5, line 44).”

In Col 5 line 44, Kurematsu discloses that: “condensed by collimator lenses 20, and reach a concave mirror 21.”

In this paragraph Kurematsu asserts that his optical system is constructed of elements 20 and 21, which collimate the light arriving from the R G B light sources. As noted before, Kurematsu’s optical system requires R G B light sources, and not an image. The method introduced in the current application can be implemented on any frequency range in the spectrum, while Kurematsu calls for R G and B light sources, which are in the visible spectrum only.

Regarding claim 5, the Office Action stated that “Kurematsu discloses, where the same device used for focusing the desired object can be used for projecting and collimating enhanced image (as shown in figure 2).”

In figure 2 Kurematsu described his system as a projection system which focuses the image generated on the mirror array [3] (desired image) and projects the said image towards a screen.

The Applicant’s invention is based on different elements and a different structure, as depicted in figure 3. The main differences are as follows:

The current invention is manipulating a natural image in order to provide the observer with an enhanced image, as opposed to the projection system required by Kurematsu to create the desired image.

In his invention, Kurematsu needs to divide the image into three light component (RGB) and then manipulate them. In the current invention the Applicant is manipulating a complete and natural image, as can be seen by the observer.

The current invention does not require a display to present the enhanced image to the observer. The image projected after the LCP contains all the information, and does not need a display, as opposed to Kurematsu that needs a screen in order to combine the 3 separate light components (RGB) to one picture.

Also, the LCP properties in the current invention are different from the mirror array technology addressed in Kurematsu's invention. Although it has a pixelated construction, Kurematsu's light modulating device is using a reflective pixel array which is driven by external signals or image generator, at predetermined timing, while each pixel in the currently invented LCP is manipulating the image automatically based on the intensity of the incident light that passes through it. In addition, the applicant's enhanced image is projected directly to the observer while in Kurematsu's system the generated image has to be projected on a display media such as a screen.

Regarding claim 6, the Office Action stated that "Kurematsu discloses, a light control panel (LCP) comprising light modulator material, pixel electrodes, light sensitive elements and associated pixel control mechanism to produce image, where the optical characteristics of any pixel of image may be controlled by the light sensitive element; and whereby the light modulating material and light sensitive elements can be used at any frequency band in the spectrum (column 6, lines 10 – 47)."

In this paragraph, Kurematsu describes his optical modulating device, and states: "as more particularly, the gradient relationship between the pixel mirror tilt angle and the brightness of the projected image", and also "color switching and gray level display of each color light component can be done only by controlling the drive voltage to each pixel mirror".

The Light Control Panel described in the current application is not switching the separate colors which the image is divided into, and is not using tilted mirrors to manipulate these colors like Kurematsu does. Rather, the Applicant's LCP is using a method of controlling the intensity of the whole natural image by using a light sensitive element (e.g. phototransistor) embedded in each pixel.

Regarding claim 7, the Office Action stated that "Kurematsu discloses, where

the light controlled panel is based on any pixilated light modulating technology as reflective (as shown in figure 2).”

As described earlier, the major differences between Kurematsu and the current invention are as follows:

1. A projection optical system (Kurematsu) versus a visibility enhancing system (Current)
2. Mirror array (Kurematsu) versus light reflective/transmissive device with embedded light sensitive elements within each pixel (Current)
3. Generation of an artificial image (Kurematsu) versus manipulation of a natural image (Current)
4. An optical system that requires a screen to create the manipulated image and make it visible (Kurematsu) versus an optical system using an optical relay, like an Eyepiece, that does not require any screen (Current)
5. Manipulating R, G, B light sources (Kurematsu) versus enhancing a real and complete image (Current).

Regarding claim 8, the Office Action stated that “Kurematsu discloses, where the control mechanism may control the magnitude of the light modulation of the entire LCP in addition to controlling image pixels by the light sensitive element (column 6, lines 10 – 47).”

In Col 6 lines 10-47 Kurematsu states: “When the characteristic shown in FIG. 5 and, more particularly, the gradient relationship between the pixel mirror tilt angle and the brightness of the projected image, which is indicated by S in FIG. 5, is used, gray level display of each color is possible. Referring to FIG. 5, the range near θ_b degree, where the B light component exits from the projecting optical system 4 is the angle range for blue display. The range near 0 degree. (or θ_g degree.) where the G light component exits from the projecting optical system 4 is the angle range for green display. The range near θ_r degree, where the R light component exits from the projecting optical system 4 is the angle range for red display. The range near θ_{bk} degree, and on the positive side of the angle range for red display is the angle

range for black display, i.e., the range wherein no light exits from the projecting optical system 4.

The pixel mirror tilt angle and the pixel mirror drive voltage have a proportional relationship shown in FIG. 6. Hence, the pixel mirror drive voltage and the brightness of the projected image have a relationship shown in FIG. 7, as is apparent from the above two relationships.

According to this embodiment, color switching and gray level display of each color light component can be done only by controlling the drive voltage to each pixel mirror. That is, gray level display of an R image is done using a gradient S_r (drive voltage is V_{r1} to V_{r2}) in FIG. 7, gray level display of a G image is done using a gradient S_g (drive voltage is V_{g1} to 0), and gray level display of a B image is done using a gradient S_b (drive voltage is $-V_{b1}$ to $-V_{b2}$). In addition, black display is done using a drive voltage V_{bk} . The drive voltage V_{bk} for black display can have any value.

In this embodiment, a full-color image may be displayed by a method of displaying primary color image frames on the projected surface (screen) in the order of RGBRGB . . . , i.e., time color mixing, or by a method of determining display colors for the respective pixels as a mosaic pattern and forming a pixel of the image to be projected on the projected surface (screen) using a plurality of pixel mirrors adjacent to each other, i.e., spatial color mixing.”

As described above, the external driving voltage in Kurematsu’s mirror array is used for tilting each pixel to the proper angle in order to generate an artificial image comprised of three basic colors, and modulating its gray levels to construct the said image. In order for an image to be viewed by the observer, the primary color image frames of the manipulated light colors need to be projected on a surface (screen) in time color mixing or spatial color mixing method.

On the other hand, the LCP in the current application controls each pixel characteristics by the pixel-embedded light sensor element. In addition to these sensors, the level to which the entire LCP can enhance the said image may be controlled by applying a single bias voltage to all the pixels, thus setting a light intensity based threshold for the pixels to start manipulating the image (i.e. whether at higher or lower intensity the

pixels will start manipulating the image). In addition, no screen is required by the current invention to display the manipulated image to the observer.

Regarding claim 9, the Office Action stated that “ Kurematsu discloses, a device like a Light Control Panel (LCP) in the light path of a system at a location where an image or a sub-image is created, such that desired image or sub image elements can have different intensities and whereby the method can be implemented for any frequency range in the electromagnetic spectrum (as shown in figure 2).”

As described above, since it is located in the path of the incident light (the full image), the LCP device described in the current application can control the image in any optical system. This is different than the mirror array device described by Kurematsu that is used to reconstruct artificial images from a video/image generator, requiring the separation of any image to its Red Green and Blue components.

The current application describes in Figure 3 an observation system, which enhances the natural image using an LCP device.

Conclusion

For all the reasons given above, applicant respectfully submits that the errors in the application were corrected, the claims comply with Section 112 and the claims define over the prior art under Section 112, since in the referenced prior art Kurematsu discloses a display apparatus of projection type, where the image to be manipulated is first divided into its three basic colors (Red, Green and Blue), where each color is manipulated in predetermined timing and then projected on a screen.

The Visibility Enhancing Method of this invention has a unique ability to control the characteristics of a complete natural image (and not broken to 3 separate light components) with the control signals created automatically inside the LCP based on the intensity of the incident light, and improve visibility by affecting only certain portion of the image.

Therefore, claims 10 to 20 are allowable over Kurematsu and their prompt allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is asked to contact the undersigned at the telephone number below.

Respectfully submitted,



Jonathan Peeri

Phone: (818) 713-8486

Dated: 10 of October , 2005.